## **Environmental Checklist Approval Form**

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EC No.:	RWMC-99-00	2 Rev. 1	•
Project Title:	RWMC - Ope	rable Unit 7-10 Glovebox Excavator M	ethod Project
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Program/Project	Manager:	Mike Pratt	4-2-02 Date
Facility Manage	<b>::</b>	T. Mike Dicken	Date
DOE-ID NEPA Office:	Compliance	Electron Ceponed atta	4/8/12 Date
Contractor NEP	A Compliance	7	

Officer:

# ENVIRONMENTAL CHECKLIST Approved Copy

EC Document No.: RWMC-99-002 Rev. 1

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form. SECTION A. Descriptive Information:						<u> </u>	<del></del>						
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DOE-HQ Program: EM-40						Date: March 1, 2002							
Performing Organization: Environmental R	estoration		Telephone No. E-mail										
Contact		Nam	<u> </u>			<del></del>		.il					
DOE Project Technical Manager:	Peter J. Dirkmaat					526-1439	dirkmapj						
Facility Operations Manager:	T. Mike Dicken					526-1085	dicktm	cktm					
Program/Project Manager:	Mike Pratt					526-5565	pratmb						
Project/Technical Contact:	Steven A. Davies					526-4789	sdv						
Alternative Project/Technical Contact:	David E. Wilkins					526-7495	dww	wwt					
Environmental Field Support Contact:	Brent N. Burton					526-8695	btb						
modification, maintenance, re and end dates, approximate constitution.  SECTION C. Environmental Aspects / Post attachment provide specific p	SECTION B. Project Description: Attach an accurate and concise description of the project or activity. Including type of activity (e.g., new construction, process modification, maintenance, research and development, or work for others), location (e.g., area, building, laboratory), purpose and need, project start and end dates, approximate cost.  SECTION C. Environmental Aspects / Potential Sources of Impact: Would the action involve, generate, or result in changes to any of the following? (If Yes, on attachment provide specific potential impact information such as types and amounts of chemicals, waste, effluent, or emissions; size of modification,												
soil disturbance; or type of ta	nk, equipment, process, or	Yes		ention meast	ires).	Causas	<del></del>	T	133				
Source			No	11 7 1	3-1 117	Source aste Generation		Yes	No				
1. Air Pollutants		Х	<del> </del>					X	<u> </u>				
2. Asbestos Emissions			X			rith Wildlife/Habitat		<b></b>	X				
3. Biological Hazards		<u> </u>	X.	<del></del>		urplus Property and Materials		X	ļ				
4. Chemical Use and Storage		X		14. PCB C				X					
5. Contaminated Sites Disturbance		X				Materials Use and Storage		X	<u> </u>				
6. Cultural/Historical Resource Disturbance		X				Waste Generation	·	X	<u> </u>				
7. Discharge to Wastewater Systems or Ground	water /4.	X	<u> </u>	<u> </u>		azardous Materials or Waste in Ti			X				
8. Drinking Water Contamination			X	18. Surface	Wate	er and Storm Water Contamination	n	x	Ŀ				
9. Hazardous/Mixed Waste Generation		Х		19. Use, Re	cuse a	nd Recycling of Resources			X				
10. Hazardous/Rad. Material and Waste Handlin	g and Trans.	X		20. Work V	Within	a Floodplain		T	Х				
Sheet (see next page). Check	and do one of the following	ng:				eck appropriate section numbers (		•	ork				
X If required to submit EC by MCP-3480, A Programs Policy and Permitting Departme	nt, John S. Irving (MS 34)	28) or	E-mail (.	ISI4) for revi	ew ar	nd approval.							
If not required to submit EC by MCP-3480 (in Signature Block), and place copy of EC	in project files.				r "Exi	sting EC" or "Does not require an	approved EC"),						
SECTION E. Instructions and Conditions	: (If Yes, see attachment	for ins	truction	s.)				Yes	No				
1. Instructions from MCP-3480?			<u> </u>					X					
2. Conditions Required Before Starting Project?								<u> </u>					
SECTION F. NEPA Level of Documentat									<del></del>				
CX: EA: EIS: CERCLA: X	Previously approved NEP existing environmental ch	ecklist	(provide	# below):	1 1	Does not require EC approved by Er routine maintenance, operational act	ivities):		<u>·</u>				
Reference(s): In accordance with the June 199 CERCLA process for review of actions to be		he Na	tional E	nvironmente	al Pol	icy Act, the Department of Ener	gy will rely on t	he					
Note: For projects checked above as "CX" (Caterequirements for environmental, safety, and heal disposal, recovery, or treatment facilities; 3) districts in the environment such that there would be extraordinary circumstances related to the proposition of the p	th, including requirement urb hazardous substances, e uncontrolled or unpermi usal exist which would affe ns with potentially or cum	is of Do , pollut itted re ect the sulative	OE order iants, con eleases; 4 significa ely signif	rs; 2) require staminants, o ) adversely a nce of the ac	siting or CE Mect of tion, a	g and construction or major expan RCLA-excluded petroleum and na environmentally sensitive resource	ision of waste stor atural gas produces. In addition, no	rage, ets that p					
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EC Document No.: RWMC-99-002 Rev. 1

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ā	4.36 Purchasing diesel fuel 7.37 Mandaling & repairing motor venicle ess station human	₹	4.38 Maintaining, testing, and disposing of halon-containing	Lead	4.39	classifying newly discovered lead	4.41 Shipping product lead off-site for direct retree (that is no	_	2	4.42 Purchasing refrigerants, appliances containing	refrigerants, system components that operate using	4.43 Maintaining, servicing or repairing stationary hearing	ventillation, air conditioning and refrigeration (HVACR)	Equipment	1.14 Maintaining, servicing or repairing motor vehicle air	or disposing of appliances	containing refrigerants	Ĕ	4.46 Procuring, applying and storing pesticides	Procuring	X 448 Procuring goods and services		Leasing, renting, or transacting real property	핕	[4.50 Conducting new of modifying existing research and development	Red activities and small scale inition molecus	ine Activ		A 14.1.0 Performing routine maintenance activities Septic Tanks	Constituting of modifying septic tanks or systems	Discharging to septic tanks or systems	4.54 Maintaining and repaining septic tanks or systems		- Distur	*340	Reporting and Elemina in emiliorary with	4.58 Oil spills that cannot be cleared within 24 hours	Cleaning up spills and releases of PCBs	Storm water - Activities to Monitor Storm Waters at the INEEL Site	Polittion Prevention Des for Industrial Action	Tanks Aboveground Storage Tanks (AST) and Underground	Storage Tanks (UST)		4.51 Operating AS1s and non-regulated USTs 4.62 Repairing ASTs and non-regulated USTs
4.2 Performing activities that man beautiful		Chemical Products/Chemicals/Hayardone Aganta	X 4.4 Purchasing Chemical Products/Chemicals/Hazardous Agents	X 4.5 Using & Storing Chemical Products/Chemicals/	Contaminated Areas - (Radiological Chemical)	X 4.6 Working in a CERCLA area of contamination	ŗ	4 8 Constructing/modifying facilities that store of in containers	Drinking Water	Constructing of modifying drinking water swiems		4.11 Sampling drinking water systems	4.13 Exceeding permitted or parallel 1.15		4.14	X 4.15 Constructing/modifying facilities, equipment of processes	(including changes to operating conditions)	as part of routine maintenance	X 4.17 Operating facilities, equipment, or processes	4.18		14.20 Monitoring storm water according to the Storm Water	4.2  Manufacturing wood furniture & wood 6			4.24 Decontaminating equipment containing or contaminated	WITH I CLUS CONTROL OF THE CONTROL O	}	4.26	X 4.27 Deactivating Becomenificating dismanting of closing	Facility. Equipment and/or December 41.17	X 4.28 Relocating portable air emission sources, or bringing	portable or stationary air emission sources onto INEEL	Constructing or modifying stationary or portable air	X 4.30 Starting up, shutting down, or performing scheduled		X 4.31 Operating stationary facilities and equipment that emit air	X 4.32 Operating stationary facilities and equipment that		4.33 Exceeding permitted or regulatory limits from stationary	air emissions sources	A 14.34 Performing activities with the potential for fugitive dust or fligitive emissions	4.35 Conducting open furning	

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#### **ENVIRONMENTAL CHECKLIST**

Approved Copy

EC Document No.: RWMC-99-002 Rev. 1

Page 3

#### **Environmental Checklist Attachments**

Section B. Project Description (continued): Attach an accurate and concise description of the project or action. Including type of action (e.g., new construction, process modification, maintenance, new activity, research and development, or work for others), purpose and need, pollution prevention and waste minimization measures, projected start and end dates, and approximate cost.

The Operable Unit (OU) 7-10 Glovebox Excavator Method Project has been developed by the U.S. Department of Energy Idaho Operations Office (DOE-ID) to demonstrate retrieval of transuranic waste from OU 7-10 (Pit 9) at the Idaho National Engineering and Environmental Laboratory (INEEL) Radioactive Waste Management Complex (RWMC) (See Figure 1 showing site location). The OU 7-10 Glovebox Excavator Method Project was developed by the DOE-ID in consultation with the U.S. Environmental Protection Agency (EPA), Region 10, and the Idaho Department of Environmental Quality. The OU 7-10 Glovebox Excavator Method Project is Stage II of the OU 7-10 interim action as defined in the Record of Decision: Declaration of Pit 9 at the Radioactive Waste Management Complex Subsurface Disposal Area at the Idaho National Engineering Laboratory, Idaho Falls, Idaho (October 1993) and the 1998 Explanation of Significant Differences (ESD) for the Pit 9 Interim Action Record of Decision at the Radioactive Waste Management Complex at the Idaho National Engineering and Environmental Laboratory (September 1998).

In June 2000, the draft OU 7-10 90% Remedial Design and Remedial Action (RD/RA) Work Plan for Stage II (DOE/ID-10767) was submitted for agency review. Schedule considerations associated with that document led to a modified approach for Stage II as described in Waste Area Group 7 Analysis of OU 7-10 Stage II Modifications (INEEL/EXT-01-01105, October 2001) and as documented in the OU 7-10 Glovebox Excavator Method Project Conceptual Design Report for Critical Decision 1, (INEEL/EXT-01-01512, January 2002). The modified scope associated with the January 2002 conceptual design necessitates the revision of this environmental checklist to address the changed scope and associated environmental impacts.

The entire interim action project has three stages as defined by the 1998 ESD and as briefly described below.

<u>Stage I</u> - involved installation of probe casings for the collection of nonintrusive characterization information. Stage I activities were addressed in RWMC-98-001, which was approved June 22, 1998. Stages I and II are intended to obtain characterization and other information needed for assessment of the radioactive and hazardous waste disposed of in the SDA.

Stage II - referred to as the Glovebox Excavator Method Project, includes limited retrieval and excavation in a selected area of OU 7-10. This environmental checklist addresses only the Glovebox Excavator Method Project activities. It is noted that the 1998 ESD defines a limited amount of work scope that will not be performed as part of the Glovebox Excavator Method Project work scope (e.g., treatability studies). Consequently, a separate environmental checklist will likely be required in the event that work scope not being performed as part of the Glovebox Excavator Method Project, such as the treatability studies, were to be performed at a future time.

<u>Stage III</u> - a full-scale remediation of Pit 9. The scope and planning for Stage III are dependent upon completion of Stage III. Thus, the schedule and implementation details for Stage III are not defined at this time and Stage III scope is not evaluated as part of this environmental checklist.

In 1993, an environmental assessment (EA) was prepared for the cleanup of Pit 9 (Supplement to the Revised Proposed Plan for a Cleanup of Pit 9 at the Radioactive Waste Management Complex, Idaho National Engineering Laboratory, DOE/EA-0854, June 1993). However, because of agency-directed scope changes through the 1998 ESD, the EA did not cover the activities that are addressed in this checklist. DOE no longer requires NEPA for CERCLA activities, so no additional NEPA documentation is required. This environmental checklist documents that the activity is being conducted under CERCLA and meets the requirements of the 1994 Secretarial Policy.

EC Document No.: RWMC-99-002 Rev. 1

As presented in the ROD, Pit 9 was used for disposal of radioactive waste from November 8, 1967 to June 9, 1969. It was used to dispose of approximately 110,000 cubic feet (3,115 cubic meters) of transuranic waste (as defined in 1969, > 10 nCi/g transuranic) from the Rocky Flats Plant and additional low-level waste (as defined in 1969, < 10 nCi/g transuranic) from waste generators located at the INEEL, for a total estimated waste volume of 150,000 cubic feet (4,248 cubic meters). The estimated volume of overburden is approximately 250,000 cubic feet (7,079 cubic meters). The estimated volume of soil between and below the buried waste is approximately 350,000 cubic feet (9,911 cubic meters). Most of the transuranic waste consists of drums of sludges (contaminated with a mixture of transuranic waste and organic solvents), drums of assorted solid waste, and cardboard boxes containing empty contaminated drums. The size of the retrieval area addressed by the Glovebox Excavator Method Project is approximately 2,025 cubic feet to 3,375 cubic feet in the southern end of Pit 9 (See Figure 1). Existing information indicates that the waste located in the Glovebox Excavator Method location originated at the Rocky Flats Plant.

The glovebox excavator method design allows all waste zone material retrieval, sampling, and packaging to be conducted inside a contaminant confinement structure by personnel outside the confinement. The confinement (with a filtered exhaust system) protects both workers and the public, and consists of a Weather Enclosure Structure (WES) enclosing the contaminant confinement (Retrieval Confinement Structure [RCS]). The WES is anchored to a Facility Floor Structure (FFS), which supports the equipment. Waste is processed in the Packaging Glovebox System (PGS). The key components of the design (excavator, confinement, and gloveboxes) use standard commercial products and fabrication techniques. For example, the excavator is a standard backhoe modified to seal to the confinement and equipped with enhanced television viewing. It is operated in the normal manner, but is modified to operate in a single stationary position.

The primary waste stream generated through the Glovebox Excavator Project activities will consist of a combination of waste streams originally generated at the Rocky Flats Plant (RFP) and subsequently disposed in Pit 9 during 1968. This is because retrieval with the backhoe type excavator will lead to some commingling of the buried wastes, and the original waste containers are assumed to have lost their integrity through long term corrosion (i.e., "intact" drums of waste are not expected to be encountered during retrieval). The waste streams in the retrieval area consist of RFP 74-series sludges, graphite molds, combustible and non-combustible wastes, empty contaminated drums, and interstitial soils.

The overall project scope for the Glovebox Excavator Method Project includes design and construction, procurement, startup testing, inspection and readiness evaluation, excavation and retrieval, characterization, maintenance, waste transfer to Advanced Mixed Waste Treatment Facility (AMWTF), facility shutdown and pit closure, and deactivation, decontamination, and dismantlement (DD&D). Major project elements are outlined below:

CONSTRUCTION: The following is a list of major construction activities and support structures that may be constructed in support of the Glovebox Excavator Method Project. The list is not all inclusive. NOTE: Should construction activities change significantly, e.g., location, project personnel will notify appropriate Environmental Affairs personnel.

<u>Site Development</u> - excavation, utilities, and site grading/contouring including installation of new gravel pads to support the facilities.

Fire Riser Building – small building located near RWMC 657 to support tie-in to the RWMC fire water line that terminates on the west end of the RWMC operations area. Connections will be made to the fire riser where dry pipes are to be installed and run above ground to provide fire protection access near Weather Enclosure Structure.

Power Supply Line – installation of above-ground conduit from an existing overhead power line near the Cold Test Pit North to a portable electrical substation mounted on a skid that is located at the southwest corner of Pit 9.

Weather Enclosure Structure (WES) – commercial grade structure attached to the facility floor structure. The WES is a prefabricated steel frame structure covered with an insulated fabric and is located over the excavation area at the southern end of Pit 9.

<u>Facility Floor Structure (FFS)</u> – The FFS is the framing and flooring for the facilities located on Pit 9 (e.g., WES, RCS, and gloveboxes). The FFS is designed to support the structures, provide a working surface, and span any potential

EC Document No.: RWMC-99-002 Rev. 1

subsidence areas. The FFS includes the steel shoring box that provides the perimeter for the arc-shaped excavation area. The box extends approximately 3.5 ft into the overburden and is installed prior to actual facility operations.

Retrieval Confinement Structure (RCS) – the RCS is a prefabricated, modular panel structure that encloses the excavation area. The RCS functions as the contaminant confinement structure. A standard, off-the-shelf backhoe with the hydraulic arm inside the RCS and cab outside the RCS is used to retrieve the waste.

<u>Packaging Glovebox System (PGS)</u> – the PGS consists of three rectangular, stainless steel gloveboxes with gloveports that are used to examine waste and package retrieved waste into new drums. Each glovebox includes three drum bagout ports for repackaging of the waste.

Miscellaneous Support Systems – the facility includes a number of support systems requiring construction and installation including a glovebox fissile monitoring system, electrical systems, heating, lighting and ventilation systems, dust suppression systems, a breathing air system, a fire protection system, life safety systems (e.g., fire alarms) and monitoring systems (e.g., emissions monitoring).

PROCUREMENT: The following is a list of major proposed items (or similar items) that may be purchased in support of Glovebox Excavator Method project. The list is not all-inclusive.

- PGS, RCS and WES
- Backhoe excavator
- FFS
- · Criticality alarm system
- Fissile detector system
- Dust suppression systems
- Construction subcontracts for mechanical, electrical, structures and site preparation

**OPERATIONS**: The following information provides a summary of proposed operations.

Prior to commencing actual retrieval operations, operational readiness reviews and CERCLA inspection activities will occur to ensure readiness to operate. The project will implement systems operability testing and system integration testing as part of the pre-operational phase. The project may also implement cold testing of various retrieval systems through construction of a mock-up at a location such as the Cold Test Pit located south of the RWMC.

The Glovebox Excavator Method Project operations begin with overburden removal to a specified depth, then the excavator arm, contained within the confinement structure excavates a semicircular swath of waste zone material. The retrieved waste zone material is placed in a transfer cart by the excavator bucket. The carts transport waste zone materials inside the gloveboxes where the material is visually inspected and sampled and repackaged in new containers. Each of three gloveboxes is equipped with three drum bagout stations for packaging the material into 55-gal and 85-gal drums. It is estimated that approximately 350 55-gal drums and 150 85-gal drums will be generated. The packaged drums are then transferred to the Advanced Mixed Waste Treatment Facility (AMWTF) for processing and subsequent transfer to the Waste Isolation Pilot Plant. The AMWTF will perform non-intrusive assay of the drums and receive the drums into their Resource Conservation and Recovery Act (RCRA) permitted storage modules pending final characterization and certification of the wastes to the AMWTF Waste Acceptance Criteria (WAC).

Following completion of waste removal, activities will include sampling of underburden soils, return of overburden soils to the excavation and closure of the pit, safe shutdown of the facility and deactivation, decontamination, and dismantlement (DD&D). The construction of a temporary CERCLA storage facility, located adjacent to the western Pit 9 boundary, may occur although the current plan is to transfer the repackaged drums directly to AMWTF without interim CERCLA storage. The storage facility will consist of a relocated existing fabric structure currently located at the RWMC Cold Test Pit South Area. In addition to the fabric structure, a number of small hazardous waste storage units (similar in size to standard cargo containers) may be located in this same area to provide Toxic Substance Control Act (TSCA) compliant storage capacity.

EC Document No.: RWMC-99-002 Rev. 1

The construction and operation of the CERCLA facilities in support of the Glovebox Excavator Method Project scope will be performed in accordance with Applicable or Relevant and Appropriate Requirements (ARARs). ARARs for OU 7-10 are documented in the OU 7-10 Record of Decision. Specific ARARs implementation details for the project will be documented in documentation associated with the Title design submittal.

Glovebox Excavator Method Project construction activities are scheduled to begin in 2002. Operational activities are scheduled to conclude in 2004. DD&D activities will be implemented following the conclusion of facility operations. The approximate cost of the Glovebox Excavator Method Project is \$78-82 million based on the conceptual design cost estimate.

Section C. Environmental Aspects (continued): (If you answered Yes to any Section C items, label with Section C Item Number and explain below.)

1. Air Pollutants – Remedial actions must meet the substantive requirements of the Clean Air Act (CAA), which are considered either Applicable or Relevant and Appropriate Requirements (ARARs), and will include State of Idaho and Federal requirements. The performing organization Project Manager shall ensure CERCLA project personnel calculate projected emissions from the CERCLA remediation and maintain documentation in the CERCLA project file. Control of pollutant emissions may be negotiated with EPA subject to public review and comment. CERCLA actions involving radionuclide emissions must be reported in the NESHAP annual report. An Air Permitting Applicability Determination (APAD) has been approved for the proposed action (#99-54). Details regarding the anticipated air emissions and their requirements are identified in the APAD, Section E, Summary of Requirements of Operations (Attachment 1).

A diesel generator will be used as an optional standby power source for the facility. The standby generator is a 200 kW generator and trailer set. The accompanying fuel tank is 250 gallons with "double wall sub-base (or equal design)" with leak detection.

- 4. Chemical Use / Storage Typical construction chemicals, such as adhesives and lubricants will be used in support of the proposed action. Non-hazardous chemical substitutes will be used in the place of hazardous chemicals as long as the non-hazardous substitutes meet the requirements/specifications of the requester. Affirmative Procurement (MCP-592) will be used as guidance in procuring applicable chemicals and materials. Diesel and other fuels will be used during construction and operation. Spill prevention/minimization measures will be employed during storage and use of chemicals/fuels.
- 5. Contaminated Sites Disturbance Soil will be disturbed to construct the facilities, however, the area is a previously disturbed area. A Storm Water Pollution Prevention Plan for Construction Activities (SWPPP-CA) will be prepared and approved for the facilities prior to any soil disturbance. NOTE: More than one SWPPP-CA may be prepared to address specific project elements. Reference Section E, Conditions, No. 1 for additional guidance. Should additional fill be needed to bring the area up to grade, it will be taken from INEEL borrow sources.
- 6. Cultural/Historical Resource Disturbance The proposed activity is within the RWMC boundary where no sensitive cultural resources are anticipated. However, unanticipated discoveries of cultural materials have been documented in similar situations on the INEEL. In the event that objects or materials that are not an expected component of the subsurface environment (i.e. bones, dense concentrations of obsidian artifacts) are unexpectedly encountered, actions will be taken to stabilize the find(s) and cease any activities affecting them. The INEEL Cultural Resource Management Office shall be contacted immediately for appropriate guidance.

An exemption for the stop work requirement will be sought for the waste retrieval activities associated with this project due to high disturbance, potential contamination, and in accordance with the DOE As Low As Reasonably Achievable Standard (reference Section E, Condition No. 2). If the exemption cannot be obtained, the project will comply with the requirements identified above.

# Approved Copy EC Document No.: RWMC-99-002 Rev. 1

7. Discharge to Wastewater Systems or Groundwater - Several potential water discharge scenarios are associated with the Glovebox Excavator Method Project Activities. Because the facility is located on Pit 9, the potential water discharges must comply with the liquid discharge requirements of DOE 5400.5. Prior to discharging water to Pit 9, approval must be obtained from Environmental Affairs (reference Section E, Condition No. 3).

The potential water discharge scenarios are:

- A number of hydrostatic and other system testing/draining activities will require implementation in order to test and maintain the facility fire protection systems.
- The facility employs a water based fire protection system. The system employs dry-pipe automatic sprinkler systems in the WES and RCS, a manual deluge system in the RCS, and a water-mist system in the PGS. The discharge associated with the systems would be in an emergency response setting in order to extinguish a fire.
- The facility includes the use of a dust suppression system that employs a misting system and a dry fog system. The systems are used on an as needed basis to control fugitive dust generated as the soils and wastes are retrieved. The systems do not lead to saturated conditions or water volumes that would lead to percolation of water into the subsurface. Moistened soil is removed as it is misted, thus preventing spread of contamination
- Water may be used for dust suppression during construction and operations. In addition, water may be added to pit-run gravel fill material to achieve appropriate compaction of the gravel base used to support the facility.
- 9. Hazardous/Mixed Waste Generation The proposed project will generate hazardous waste through construction. operational activities (such as absorbent materials with hydraulic fluid and unused chemicals), and DD&D although it is anticipated that the wastes not originating from the Pit 9 (or contaminated by Pit 9 materials) will be industrial or conditional industrial wastes. It is noted that all waste streams generated as part of implementing the CERCLA ROD, including construction, operational and DD&D waste streams, will be managed as CERCLA wastes.

The materials (waste & soil) retrieved from the 75-125 cubic feet retrieval area will be mixed waste. After the waste is examined, it will be repackaged in new drums and transferred directly to the AMWTF or placed in the CERCLA Storage Facility for temporary storage prior to transfer to the AMWTF. An additional volume of secondary wastes (e.g., PPE, used HEPA filters) will be generated from project operational and DD&D activities that will also require management as mixed waste. Amounts and types of waste will be detailed in the project Waste Management Plan that is prepared as part of the Title design submittal.

- 10. Hazardous/Radioactive Material and Waste Handling and Transportation A Hazardous Waste Determination will be performed on all waste to determine the appropriate management practices. Transportation of waste will be performed in compliance with appropriate requirements. Practical efforts will be made to prevent leaks and spills that would generation additional waste during handling and transportation.
- 11. Industrial Waste Generation Solid waste in the form of typical construction debris and personal protective equipment will be generated. Amounts and types of waste are detailed in the Waste Management Plan that is part of the Title design submittal. If possible, secondary, solid waste such as labels, rags, and regular trash will be disposed of at INEEL waste disposal facilities. Waste streams will be evaluated to implement actions for minimizing waste entering the landfill and maximizing recycling and reuse.
- 13. Managing Surplus Property and Materials Any property and material that can be reused will be excessed. However, project personnel are anticipating most equipment and materials will de disposed of as waste. A Waste Management Plan will be prepared documenting waste types and quantities.
- 14. PCB Contamination The removed waste may contain PCBs and equipment decontamination activities may generate PCB contaminated waste. This waste stream will be managed as mixed waste (Reference No. 9 above).
- 15. Radioactive Materials Use and Storage The project will use approximately 10 radiation sources to support daily response checks and periodic calibrations of radiological control instrumentation. The sources will be under the control of

EC Document No.: RWMC-99-002 Rev. 1

a qualified radiation source control custodian. The sources will be kept at the RWMC Radiation Control Offices or a specially designated area in the project area within the SDA.

- 16. Radioactive Waste Generation During construction and waste retrieval activities, radioactive waste in the form of personal protective equipment may be generated. Amounts and types of waste are detailed in the Waste Management Plan submitted as part of the Title design package. If possible, secondary, radioactive waste will be treated and/or disposed of at INEEL facilities.
- 18. Surface Water and Storm Water Contamination The project is conducting significant site grading, recontouring and other construction activities with the potential for contamination of storm water. A project SWPPP is being prepared to address potential storm water issues.

The potential for surface water flooding at the RWMC and the Pit 9 area was evaluated in a study entitled "100-Year Floodplain and 25-Year Runoff Analyses for the RWMC at the INEEL" by Mitchell, et. al. (2001) (INEEL/EXT-02-00093). The Pit 9 area and the Glovebox Excavator Method Project are outside the limits of the 100-year floodplain determined in this report. However, the maximum potential water surface elevation in the Pit 9 area is influenced by the operational use of valved culverts in the Pit 9 area during large runoff events, as discussed below.

For the purposes of the above-referenced RWMC 100-year floodplain study, all culverts that are equipped with valves were modeled with valves open in order to represent the maximum potential peak flow in the main channel flow system. The valved culverts in and near the Pit 9 area are typically kept closed during normal operation. Additional analyses were performed to determine a maximum water surface elevation in the Pit 9 detention basin, if the valved culverts were closed during a 100-year storm event.

Results of this analysis indicate the maximum potential water surface elevation anticipated in the SDA Pit 9 area during the 100-year storm is 5008.9 ft msl, if the valved culverts are closed. This water surface would occur in the 24th hour of the 24-hour storm event. Should the 24-hour storm event occur, the Pit 9 area is protected from flooding by a berm south of the pit and north of the detention basin (see Figure 1).

Section E. Conditions and Instructions: (Include conditions required before starting project and select applicable Work Activity Instructions from MCP-3480)

#### Conditions:

- 1. A Storm Water Pollution Prevention Plan for Construction Activities will be approved prior to any soil disturbing activities. More than one plan may be prepared to address specific project elements. For additional information, contact DeAnna Braun at 526-8409.
- 2. An exemption for the stop work requirement will be requested for waste retrieval activities should cultural resources be encountered. Prior to waste retrieval activities, the exemption must be obtained or project personnel will comply with the requirements outlined in Section C, No. 6, Cultural/Historical Resource Disturbance, above. For additional information, contact Brenda Pace at 526-0916.
- 3. Approval must be obtained from Environmental Affairs prior to discharging water to the Pit 9 area. For additional information, contact Jim Graham at 526-7935.

#### Instructions:

The Management Control Procedure – 3480 "Environmental Instructions for Facilities, Processes, Materials, and Equipment" provides the environmental instructions for this proposed activity based on the work activities identified in Section D (page 2). Refer to the following sections in MCP-3480 for the appropriate environmental instructions:

- 4.1.6 Performing routine maintenance activities
- 4.4 Purchasing Chemical Products/Chemicals/Hazardous Agents
- 4.5 Using, Storing and Dispositioning Chemical Products/Chemicals/Hazardous Agents
- 4.6 Working in a CERCLA Area of Contamination

Page 9

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EC Document No.: RWMC-99-002 Rev. 1

- 4.15 Constructing or Modifying Facilities, Equipment, or Processes (including changes to operating conditions)
- 4.17 Operating Facilities, Equipment, or Processes
- 4.19 Maintaining and Repairing Facilities, Processes, and Equipment
- 4.23 Maintaining Equipment Containing, or Contaminated with Polychlorinated Biphenyls
- 4.25 Preparing Buildings or Facilities being Transferred to Surplus or Placed into Standby (Inactive) Status
- 4.27 Deactivating, Decontaminating, Dismantling, or Closing Facilities (including Trailers), Equipment, and Processes
- 4.28 Relocating Portable Air Emission Sources, or Bringing Portable or Stationary Air Emission Sources onto the INEEL
- 4.29 Constructing or Modifying Stationary Air Emission Sources
- 4.30 Starting Up, Shutting Down, or Performing Scheduled Maintenance on Stationary Air Emissions Sources
- 4.31 Operating Stationary Facilities and Equipment that Emit Air Pollutants
- 4.32 Operating Stationary Facilities, Processes and Equipment that Emit Radionuclides
- 4.34 Performing Activities with the Potential for Fugitive Dust or Fugitive Emissions
- 4.48 Procuring Goods and Services
- 4.51 Performing Routine Administrative Activities
- 4.57 Disturbing Soils or Altering Stream Channels
- 4.58 Reporting and Cleaning Up Spills and Releases
- 4.59 Cleaning Up Spills and Releases of PCBs
- 4.76 Procuring External Laboratory Services for Waste Characterization
- 4.77 Procuring Off-Site Waste Management and Recycling Services
- 4.78 Planning to Generate Waste
- 4.79 Generating Waste
- 4.80 Dispositioning Excess Materials
- 4.86 Discharging New Wastewaters at the INEEL Site
- 4.87 Discharging Wastewaters at the INEEL Site

The following are facility- or project-specific environmental instructions not found in MCP-3480.

4.57 Disturbing Soils or Altering Stream Channels -- A SWPPP-CA could address construction and another SWPPP-CA could address DD&D. A SWPPP-CA could be applicable to use of an INEEL borrow source. Although not identified in MCP-3480, requirements in the INEEL Storm Water Pollution Prevention Plans for Industrial Activities (SWPPP-IA) could be applicable to use of an INEEL borrow source. Also not identified in MCP-3480, requirements of the Clean Water Act Section 404 (dredging and filling) could be applicable to use of Spreading Area A or Spreading Area B.

#### Section F. NEPA Level of Documentation and Reference(s):

1. Summary of the Proposed Action: The OU 7-10 Glovebox Excavator Method Project will demonstrate retrieval of transuranic waste from OU 7-10 (Pit 9) within the RWMC at the INEEL. The OU 7-10 Glovebox Excavator Method Project is Stage II of the OU 7-10 interim action and includes limited retrieval and excavation in a selected area of OU 7-10. This environmental checklist addresses only the Glovebox Excavator Method Project activities.

Glovebox Excavator Method Project construction activities are scheduled to begin in 2002. Operational activities are scheduled to conclude in 2004. DD&D activities will be implemented following the conclusion of facility operations. The approximate cost of the Glovebox Excavator Method Project is \$78-82 million based on the conceptual design cost estimate.

2. Level of Environmental Documentation: Use of the CERCLA Process: In accordance with the June 1994 Secretarial Policy on the National Environmental Policy Act, the Department of Energy will rely on the CERCLA Process for review of actions to be taken under CERCLA. The proposed activity supports a CERCLA action and does not support the siting, construction, or operation of a treatment, storage, or disposal facility for waste management or other purposes unrelated to CERCLA. The CERCLA documents for this activity have incorporated NEPA values to the extent

#### **ENVIRONMENTAL CHECKLIST**

Page 10

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EC Document No.: RWMC-99-002 Rev. 1

practicable, and the CERCLA documents will be made available to the public in accordance with the requirements of CERCLA.

CERCLA Strategy: In compliance with CERCLA, the Remedial Design/Remedial Action Scope of Work (SOW) was revised to incorporate the currently proposed scope of work. The revised SOW was made available for public review at the DOE information repository. DOE issued an explanation of the significant differences between this proposed action and the CERCLA Record of Decision in September 1998. DOE also issued a bulletin announcing the availability of the explanation document and offering a briefing to those who express interest.

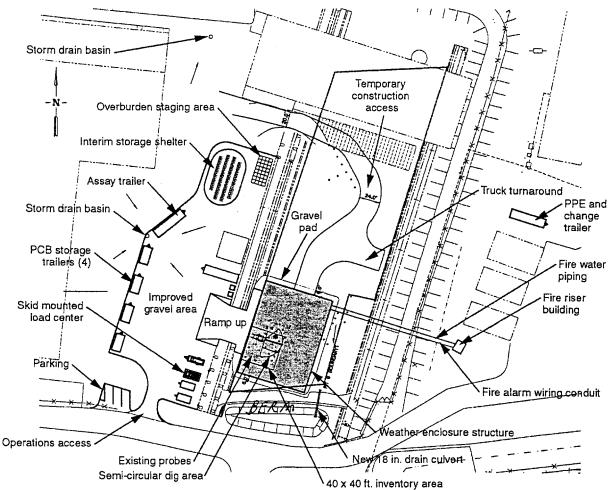


Figure 1. Site Layout Located at Pit 9 in the RWMC SDA

## AIR PERMITTING APPLICABILITY DETERMINATION (APAD) ENVIRONMENTAL AFFAIRS

Note: This attachment serves as official transmittal of the Environmental Affairs APAD and is approved based on information and project description supplied for this determination. The undersigned agree that the information in the referenced document is true, accurate, and complete to the best of their knowledge.

#### Section A. Reviewer, Tracking, and Approval

Project Title: RWMC-Operable Unit 7-10 Stagen Interim Act	ion Project-StageII			
Date: July 22, 1999	Project Number:			
APAD Tracking Number: 99-54	NEPA Document Number: RWMC-99-002			
APAD Technical Author: Norm Stanley Telephone: 526-5901	Signature: Im Sanlay	Date:		
APAD Technical Reviewer: Byron Anderson Telephone: 526-3644	Signature: Byson Anderson	Date: 7/22/99		
Manager Approval (not required for transmittal of no permitting required statements): E. Dennis Walker Telephone: 526-0226	Signature:	Date:		
DOE Project Technical Manager (not required for transmittal of no permitting required statements):  James F. Graham Telephone: 526-7935	Signature:	Date:		
Performing Organization Project Manager (not required for transmittal of no permitting required statements): Brent N. Burton Telephone: 526-8695	Signature:	Date:		
Facility Manager (not required for transmittal of no permitting required statements).  Thomas L. Clements Telephone: 526-0664	Signature:	Date:		
Section B. Air Permitting Applicability Determi	nation			
Permit to Construct (PTC) required (contact DEQ)	PTC Modification Required (contact DEQ)	•		
Prevention of Significant Deterioration (PSD) Permit	Category I Exemption	•		
Category II Exemption	Director's Exemption			
Further Evaluation for Permitting Required				
No Permitting Required, With Conditions	No Permitting Required, Without Conditions	1		
No Permitting Required, CERCLA Action with Conditions	(must meet ARARs)			

#### Section C. Brief Description of Air Pollutant Emitting Aspects of Proposed Activity

The proposed action would construct two buildings at the Subsurface Disposal Area at RWMC. One building would hav a double containment area for Pit 9 waste retrieval and a material handling area for waste characterization, treatability studies and repackaging. The other building would be used for secondary storage of retrieved waste. The project is part of the CERCLA

remediation of Pit 9. Potential emissions include futitive dust, radionuclides, toxic chemicals, and fuel-burining equipment exhaust.

#### Section D. Impact (check if applicable)

			,
Add	ditional Requirement(s) Attached	L	Air Operating Permit Certification
AP.	AD Revision Requirement	$\boxtimes$	CERCLA Remedial Action
Cha	ange in Stack Parameters		Demolition Notification
Exc	ess Emissions Reporting		Fuel Burning Equipment Particulate Matter
Fue	l Sulfur Content	$\boxtimes$	Fugitive Dust Control
Inci	nerator Control		NESHAP Asbestos Notification
ME:	SHAP Asbestos Notification CERCLA	$\boxtimes$	NESHAP Continuously Monitored Radionuclide
NE:	SHAP Radionuclide Actual Emissions		NESHAP Subcontractor Asbestos Notification
NE	SHAP Unabated Radionuclide Emissions		Notification of Emissions Change
Оре	n Burning		Particulate Matter Process Weight Limitations
Port	table Equipment Registration		Project Status
Rep	orting		Subcontractor Internal Combustion Engine(s)
Sub	contractor Permitting/Registration		Tier I AOP Duration
Tier	I AOP Renewal	$\boxtimes$	Visible Emissions

#### Section E. Summary of Requirements of Operations

The proposed action is part of a CERCLA remedial action - Remedial action must meet the substantive requirements of the Clean Air Act (CAA) which are considered either Applicable or Relevant and Appropriate (ARAR), and may include State of Idaho and Federal requirements. The performing organization Project Manager shall ensure CERCLA project personnel calculate projected emissions from the CERCLA remediation and maintain documentation in the CERCLA project file. Control of pollutant emissions may be negotiated with EPA subject to public review and comment. CERCLA actions involving radionuclide emissions must be reported in the NESHAP annual report.

NESHAP Radionuclide Actual Emissions - All radiological emissions to the environment, including those from all point and diffuse sources, must be determined for demonstrating compliance with the NESHAP Standard [see CFR 61.93 (a)] and submitted for reporting in the INEEL NESHAP's Annual Report per 40 CFR 61.94. If any fugitive radiological emissions are released, the performing organization Project Manager or Source Owner/Manager shall ensure that the calendar year emissions are determined and reported (via signed memorandum) to Jim Tkachyk by February 28 for the preceding year. Data which are already submitted into RWMIS need not be resubmitted. Contact Jim Tkachyk (LMITCO Environmental Affairs, 526-7965) for guidance on determining emissions.

NESHAP Unabated Radionuclide Emissions - The unabated radiological emissions to the environment which must be calculated for each affected stack or vent, must be calculated/measured annually per 40 CFR 61.93.(b)(4)(i) (periodic confirmatory measurement). The Source Owner/Manager shall ensure that the calendar year emissions are determined and reported (via signed memorandum) to Jim Tkachyk by February 28 for the preceding year. Contact Jim Tkachyk (LMITCO Environmental Affairs, 526-7965) for guidance.

NESHAP Continuously Monitored Radionuclides - For all continuous compliance monitored stacks (those sources with an unabated potential greater than 0.1 mrem/yr), records shall be kept at the facility documenting which radionuclides constitute greater than 10% of the unabated radiological emissions to the environment. Monitoring of these radionuclide per 40 CFR 61.93(b) is mandatory.

For all continuous compliance monitored stacks (those sources with an unabated potential greater than 0.1 mrem/yr, records shall be kept at the facility documenting compliance with 40 CFR 61.93(b) including effluent flow rate measurement procedures and frequency of this measurement, selection of monitoring/sampling site(s), compliance/deviations with the ANSI N13.1 standard, and compliance/deviations with the Test Methods found in 40 CFR 61 appendix B Method 114 (including the principles of

measurement and the QA/QC criteria found in this appendix). Records shall be kept at the facility documenting compliance against the Standard (10 mrem/yr to a maximally exposed individual) on a rolling year basis.

Fugitive Dust Control - Fugitive dust emissions that may be produced during construction, demolition, excavation, and backfilling activities must be controlled in accordance with Idaho Administrative Procedures Act (IDAPA) 16.01.01.650, "Idaho Rules for Control of Fugitive Dust". This requires that all reasonable precautions be taken to prevent the generation of fugitive dust. The performing organization Project Manager shall ensure that fugitive dust emissions for the proposed action are controlled. Some reasonable precautions may include but are not limited to, the use of water or chemicals, the use of control equipment, and the covering of trucks. For additional guidance, contact John Gill (LMITCO Environmental Affairs; 526-8406).

Visible Emissions: IDAPA 16.01.01.625 - A person shall not discharge any air pollutant into the atmosphere from any point of emission for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period which is greater than twenty percent (20%) opacity as determined by procedures contained in the Procedures Manual for Air Pollution Control, Section II (Evaluation of Visible Emissions Manual). (5-1-94). If visible emissions are observed from internal combustion equipment used for this project, or visible emissions are observed from other actions related to the project, the performing organization Project Manager shall ensure the visible emissions are in compliance with IDAPA 16.01.01.625. Contact Norm Stanley (LMITCO Environmental Affairs, 526-5901) for guidance.

	ction F. Summary of Air Emissions Environme fairs	ntal Reports Performed by Environmental
	Air Emissions Inventory (phase I & II) (John Gill)  Annual Toxics Report (Byron Anderson)  NESHAP Annual Report (Jim Tkachyk)  PSD Quarterly Report (Scott Lane)  Semi-annual Continuous Compliance Report (JimTkachyk)	Air Operating Permit (John Gill)  Continuous Compliance Monitoring (JimTkachyk)  Periodic Confirmatory Monitoring (JimTkachyk)
Se	ction G. Additional Comments or Conditions	
	ction H. Summary of Air Operating Permit Rec	quirements
	(Cleared New York Control of the Section Cont	
	Fuel Burning Equipment Particulate Matter	Fuel Sulfur Content
	Fuel Burning Equipment Particulate Matter Incinerator Control Particulate Matter Process Weight Limitations Tier I AOP Duration	Fuel Sulfur Content Open Burning
	Fuel Burning Equipment Particulate Matter Incinerator Control Particulate Matter Process Weight Limitations	Fuel Sulfur Content Open Burning Reporting
	Fuel Burning Equipment Particulate Matter Incinerator Control Particulate Matter Process Weight Limitations Tier I AOP Duration Visible Emissions	Fuel Sulfur Content Open Burning Reporting Tier I AOP Renewal
	Fuel Burning Equipment Particulate Matter Incinerator Control Particulate Matter Process Weight Limitations Tier I AOP Duration Visible Emissions	Fuel Sulfur Content Open Burning Reporting Tier I AOP Renewal
	Fuel Burning Equipment Particulate Matter Incinerator Control Particulate Matter Process Weight Limitations Tier I AOP Duration Visible Emissions	Fuel Sulfur Content Open Burning Reporting Tier I AOP Renewal

§61, Subpart H

§60.48c

§61, Subpart M		est.	§61.154 §68	
§82	·			
Section I: Air Ope	rating Permit	Requiremen	its	
None	·			
Section J: Justificati	ion for APAD			
The proposed CERCI equipment exhaust. The proposed			fugitive dust, radionuclides, toxic chemicals, and fuel-burning ct ARARs.	
	ម្រាស់ពីជាមួយទេចច ពិទៅទៅពេល	inselvine, desail	Sign spirite will control to a military material by the first	
Section K: Specify N	IEPA Text			
None				
Section L: Chemical	is IDAPA 16.01	.01.585, 586 T	Coxic Air Polutants	
Estimated toxic air pollutar attached EDF ER-WAG-7-		be below screenin	ng EL, AAC, or AACC levels in IDAPA 16.01.01.585-586. See	,
Routing Slip:				
G. L. Beausoleil	DOE-ID	MS 4201		_
J. Gillman	RWMC	MS 4201		
W. H. McBath	RWMC	MS 4201	·	
M. J. McGuire	RWMC	MS 4201	•	